

User's Guide

Text-To-Speech

BLASTER™

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Text-To-Speech User's Guide

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Printed in Singapore.

First Edition: February 1994

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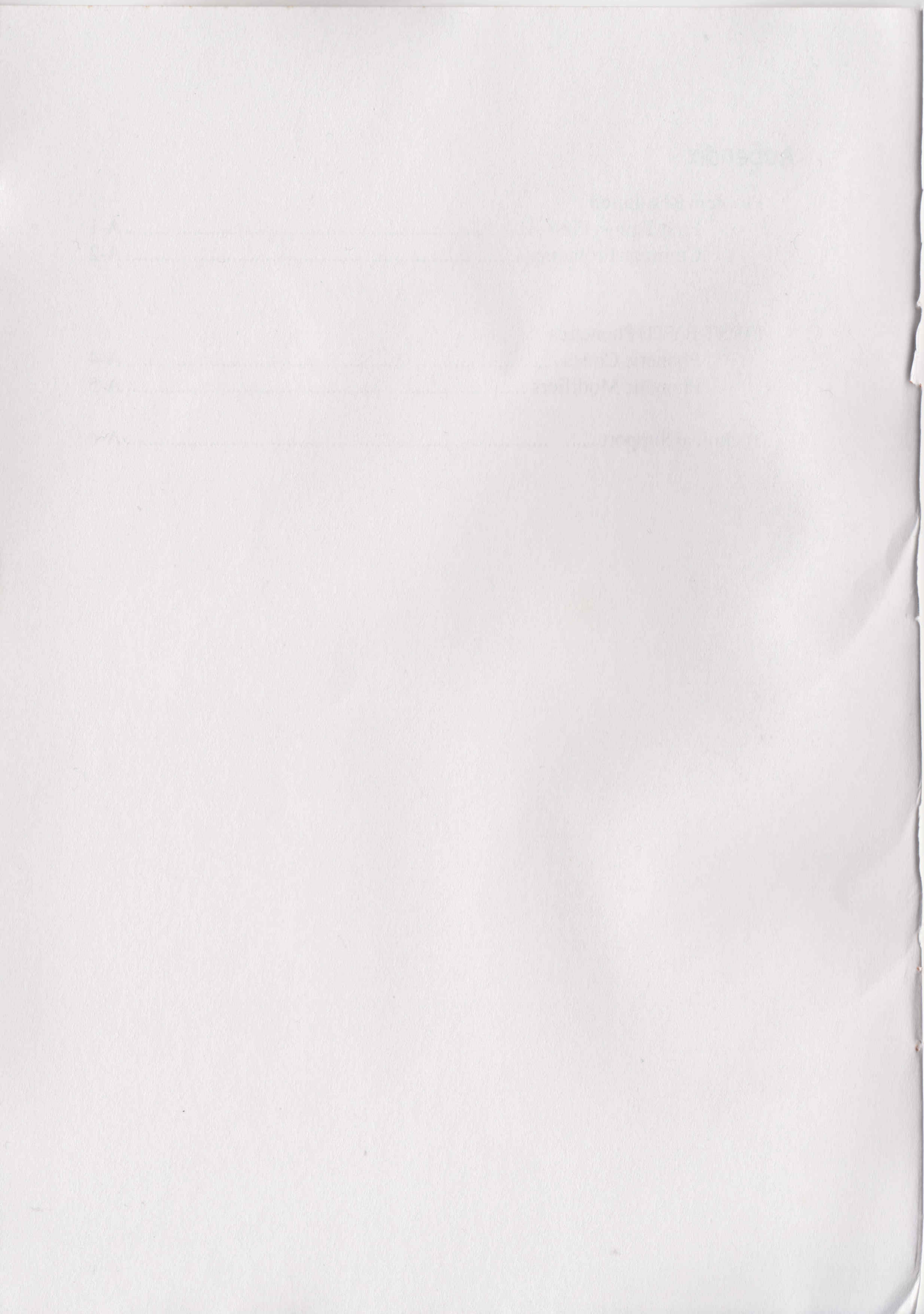
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Getting Started

In this Text-To-Speech package, we have provided you with three very interesting and useful applications. **Monologue for Windows** is a versatile product that allows you to add the element of speech to virtually every Windows application. **Talking Scheduler** is an appointment scheduling and planning program with speech and voice annotation capabilities. **SBTALKER** is a text-to-speech synthesizer program with an unlimited vocabulary that reads ASCII text, perform functions on the text and output it vocally through the speakers.

You can be up and running in a few minutes with both these applications by following these simple steps:

- ☐ Making a backup copy of the Text-To-Speech diskette(s).
- ☐ Installing Monologue for Windows, Talking Scheduler, and SBTALKER using the INSTALL program.
- ☐ Using This User's Guide.

Making Backup Copies of the Software

We recommend that you make a copy of your original diskette(s).

To copy the diskette:

1. Start the Windows File Manager

From the Disk menu:

2. Use the Format Diskette... and Copy Diskette...options

You may also use the DOS FORMAT and DISKCOPY commands.

For more information about using the Windows File Manager, refer to your Microsoft Windows manual. For more information about the DOS FORMAT and DISKCOPY commands, please refer to your DOS manual.

Installing the Applications

The Text-To-Speech disk contains a program, INSTALL, to ensure proper installation of the Monologue for Windows, Talking Scheduler, and SBTALKER in your system. The installation program is a Windows application. If you have not started Windows, you will need to do so before proceeding.

To start the installation program:

1. Insert the Text-To-Speech diskette in your disk drive A.
2. Use the Run... command from the Program Manager's File menu. In the Run Dialog Box,
3. Type A:INSTALL and press [ENTER]



Enter the respective drive if you have inserted the diskette in another drive other than drive A.

The installation program will attempt to determine the correct configuration for your system. At any time, you may override the recommended configuration by making an alternate choice as directed by the INSTALL program.

Upon completion of the installation process the INSTALL program will create a program group for Text-To-Speech, which consists of three icons, two for Monologue for Windows and one for Talking Scheduler.



If you are using a "shell" program other than the Windows Program Manager, consult the publisher's documentation for information about making the Monologue for Windows programs available.

Some Information on the Installation of SBTALKER

After Monologue for Windows and Talking Scheduler are installed in your Windows environment, you are prompted to install SBTALKER, a DOS application.

The following are the files copied to your hard disk after the installation:

- ☐ Blaster.drv
- ☐ SBTALKER.exe
- ☐ Sbtalk.bat
- ☐ Read.exe
- ☐ Echo.exe
- ☐ Sbtext.txt



Make sure that Blaster.drv resides in your sound environment's drivers directory. For example if \SB16 is your sound environment directory, ensure that the file resides in \SB16\DRV.



Similarly, make sure that the rest of the files reside in the \SB16\SBTALKER directory.

Using This User's Guide

This guide comprises the following chapters:

Chapter 1.	Introducing Monologue
Chapter 2.	Speech Generation Techniques
Chapter 3.	Using Monologue For Windows
Chapter 4.	Advanced Operational Techniques
Chapter 5.	Programming with Monologue
Chapter 6.	Using the Dictionary Manager
Chapter 7.	Creative Talking Scheduler
Chapter 8.	SBTALKER

We strongly recommend that you take a few moments to read through Chapters 1 and 2 before attempting to use Monologue for Windows. You can then refer to Chapters 3 through 6 for more detailed information on using the application.

For detailed information on using Creative Scheduler, please refer to Chapter 7.

For detailed information on SBTALKER, please refer to Chapter 8.

1

Introducing Monologue

Congratulations! You've just purchased the only PC software product which can add the element of speech to virtually every Windows application. No speech recording or "training" is necessary. Monologue for Windows offers:

- | | |
|---------------|---|
| Versatility | It allows any application, which can internally express its data in text, to speak that data. |
| Flexibility | You can utilize Monologue for Windows to speak data transferred to the clipboard or use the sophisticated DDE or DLL interfaces to customize your favorite Windows applications. |
| Ease of Use | It's a background application, much like a screen saver, so it's always there when you want it. Powerful resource management support ensures that Monologue for Windows can work with even your most memory intensive Windows applications. |
| Productivity | Now your ears can assist you in providing that extra degree of confidence. Your document <i>says</i> what you really want it to say. |
| Affordability | A patent protected software approach eliminates the need to add expensive hardware. |

To get the most from Monologue for Windows, you will need to understand some of its basic concepts. Please take a few moments to familiarize yourself with the information in this section and refer back to it before using any of Monologue for Windows' more advanced features.

Uses of Monologue for Windows

Monologue for Windows' extensive flexibility makes it the perfect companion to many of your favorite Windows applications. Now your applications will contain voice-power so your ears can complement the productivity of your eyes and hands.

The following ideas are just some of the uses of your new talking utility:

- ☐ The power of speech can now be easily added to your repertoire of popular Windows applications like Amí, Word for Windows and Excel just to name a few.
- ☐ Monologue for Windows' broad range of capabilities are coupled with an easy-to-use interface to extend its powerful features to both the casual user, the experienced programmer, and anyone in between.
- ☐ By simply highlighting a row, column, paragraph or document, or by using either the powerful DDE or DLL interfaces, you can now add voice-power to your applications. The days of painful comparisons of the computer screen and your paperwork are over. Anxieties can now be reduced due to this enhanced document control.
- ☐ Any individual that uses a personal computer running Windows for word processing, spreadsheets, electronic mail, or just enjoyment can now use Monologue for Windows to enhance their personal computer use. Monologue for Windows is an extremely flexible tool which will allow you to have the power of speech in almost any of your Windows applications.
- ☐ Frequent users of word processors recognize the value of spell checkers. Unfortunately, spell checking only verifies the existence of a word, not its appropriateness. Many times important parts of speech or grammar are incorrectly used or accidentally omitted in a document. Hearing the document spoken can be an invaluable aid in ensuring it is grammatically correct. When an inconsistent sentence or a grammatically incorrect phrase is spoken, your ears assist your eyes in proofreading your document.
- ☐ With Monologue for Windows, "background" listening is now a reality. Like listening to a radio program, you can have your computer speak any document while you perform other activities. Similarly, use Monologue for Windows to assist in sifting through electronic mail with your ears while your eyes and hands are free to attend to other tasks.
- ☐ More sophisticated users can enhance their personally developed applications by making calls to the DLL interface. Extend the macro power of your applications by defining macros which interface to either the DDE or DLL interfaces to the provided speech engine. Now you can easily "hear" any spreadsheet value which changed due to a formula value change without having to "page" your way to see the significance of the change.

- ☐ Programming enthusiasts can utilize the natural interface of speech by interfacing to any of the popular programming tools used to create Windows applications. Any pronounceable combination of letters or numbers will be spoken with ease and clarity. SmoothTalker technology will allow you to call the speech engine as you would any other Windows function. Refer to the Programming Interface section for more details.
- ☐ Monologue for Windows allows you to select the pitch, speed and volume at which your selections will be spoken. The sophisticated Dictionary Manager allows you to save your own preferred pronunciations of words and abbreviations. In addition you may maintain several dictionaries and easily change the currently active dictionary using the Dictionary Manager.

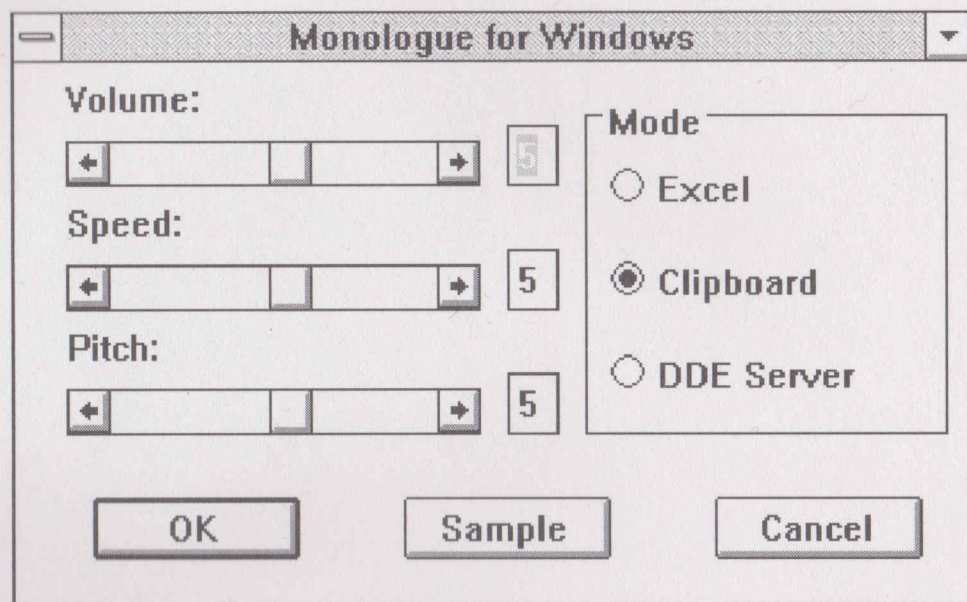


Figure 1-1: Preferred Speech Dialog Box.

Multimedia Extensions Environment

Monologue for Windows uses the capabilities of any available Wave Audio device installed for Multimedia Windows. This hardware configuration provides optimal functionality with hardware independence and coordinated allocation of system resources and time synchronization capabilities.

- ☐ All requirements for the standard environment PLUS properly installed and configured Multimedia Extensions for Windows 3.0 or Windows 3.1.
- ☐ Properly installed and configured Wave Audio Device (i.e. Creative Labs Sound Blaster audio adapter).



The documentation and software provided in this release of Monologue for Windows precedes the general availability of the Multimedia Extensions for Windows. While all reasonable efforts have been made to assure that the provided software will function properly with the release version of the Multimedia Extensions, there is a remote possibility that last minute changes will render Monologue for Windows inoperative. In this case contact First Byte for an updated version of the Multimedia Extensions drivers and libraries.

Speech Generation Techniques

There are two commonly used techniques for generating speech. The first is table-based and works like a dictionary. Each word is stored in both a text version and a “sound” version. A lookup is performed on the text version and the corresponding “sound” version is spoken.

The second technique is rule-based. No text is stored and no voice recording is necessary, just the rules used to convert from text to speech. These rules are used to convert text to a set of “sound descriptors” which are in turn converted to digital patterns which describe an output signal we hear as speech.

How Monologue for Windows Works

Monologue for Windows generally uses the rule-based method to generate speech. Because of this, Monologue for Windows can always pronounce each word it encounters. However, since English is an irregular language, words which don’t always follow the rules will be mispronounced. For this reason, Monologue for Windows also uses the table-based method for “exceptions”. You can enter your own exceptions which don’t follow the phonetic rules of pronunciation using the Dictionary Manager.

Once an audio signal has been generated, the voice is directed to either the computer’s internal speaker or a supported audio accessory.

Monologue for Windows has three distinct modes of operation: Clipboard, Excel and DDE Server. The mechanism for initiating speech differs somewhat for each mode.

Clipboard Mode

When Monologue for Windows is in Clipboard mode, all text input will be taken from the Windows "clipboard". The clipboard is an area in memory where data can be placed by one application and later read by another. This is the default mode of operation for Monologue for Windows. Data can be placed on the clipboard from most applications by selecting the data using the mouse, then choosing the "Copy" command. This command is usually located on the "Edit" menu of most Windows programs. When Monologue for Windows receives the command to begin speech, the contents of the clipboard will be retrieved, converted to speech and speech output will begin.

Excel Mode

When Monologue for Windows is in Excel mode, all input data will be extracted from the currently running copy of Microsoft Excel. This mode provides an added convenience since it bypasses the process of copying the selected data from the application to the clipboard. In this mode, the currently selected cell or cells will be retrieved from Excel when Monologue for Windows receives the command to begin speech, and the data will be converted to speech and speech output will begin.

DDE Server Mode

When Monologue for Windows is in DDE Server mode, all input data will be extracted from the DDE message stream. This is an advanced capability which allows various macro languages to initiate a DDE conversation with Monologue for Windows. Once a conversation is initiated, Monologue for Windows will speak any data sent to it by the other application.

Applications Using Monologue for Windows

Monologue for Windows is capable of speaking any text which is made available to it through any of the mechanisms described above. This means that it will work with any application which has the ability to place data in text format on the Windows clipboard or any application which has the ability to initiate a DDE conversation. Once installed, the speech capability is instantly available whenever you want it.

3

Using Monologue For Windows

The process of speaking with Monologue for Windows is divided into three steps. The three steps are identifying the data, making the data available, and commanding the data to begin speaking. But before learning how to use Monologue, you need to know how to start and set up the application.

Starting and Setting Up Monologue for Windows

To start up Monologue:

1. Open the Text-To-Speech group window.
2. Double click the Monologue for Windows icon.

The Monologue for Windows appears on your screen.

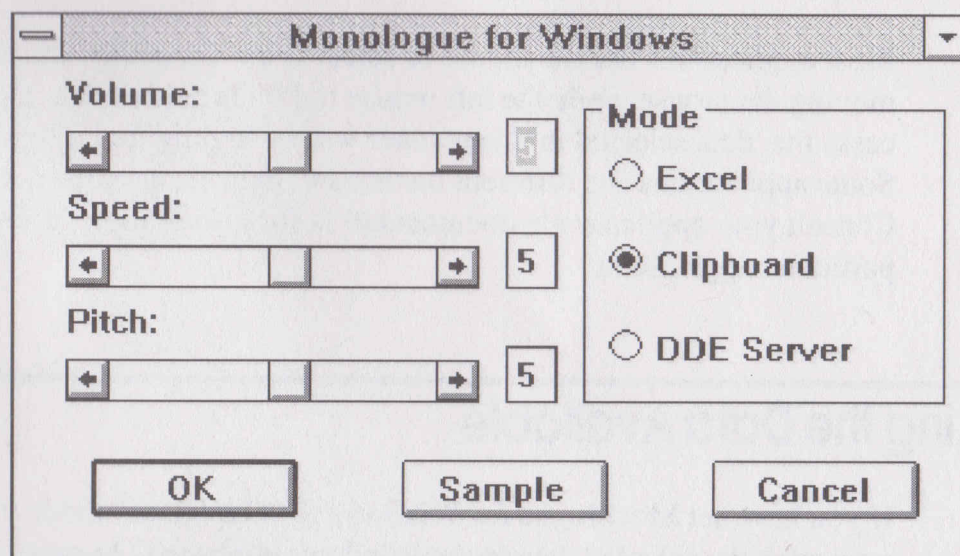


Figure 3-1: The Monologue for Windows dialog box

You may make selections for Speed, Pitch, Volume and Operational Mode using this screen. The selection of Operational Mode is very important since it will affect the mechanism used for subsequent speech requests. Be sure the selection is correct for the type of work you will be doing.

Refer to the “How Monologue for Windows Works” section in chapter 2 of this manual for assistance to select the correct Operational Mode.

To listen to the the results of your settings:

1. Press the Sample button.

Once you are satisfied with the settings,

2. Press the OK button.

This will save the current settings as the defaults and make your selections active.



Changes will not become effective until you press OK. Pressing the Cancel button will restore the setting to the last saved values.

Now that Monologue for Windows has been configured to your taste, iconize Monologue for Windows either by pressing the “minimize” button or by selecting “Minimize” from the Monologue for Windows “System” menu. The minimize button is the small box with the downward pointing arrow in the upper right corner of the Monologue for Windows window. Note that Monologue for Windows has been reduced to an icon at the bottom of your screen. Monologue for Windows is now poised for action.

Identifying the Data

Most applications use the mouse to select data. Generally this is done by moving the mouse while the left mouse button is held down. In most cases the data selected in this manner will be highlighted in some way. Some applications use different methods to indicate a selected data block. Consult your application’s documentation for information specific to a particular application.

Making the Data Available

If you have set Monologue for Windows to “Clipboard” mode you must now copy the selected data to the Windows clipboard. In most cases this is done by using the “Copy” command from the application’s “Edit”

menu. Your application may have a different method for performing this step. Consult your application's documentation for information specific to a particular application.

If you have set Monologue for Windows to "Excel" mode and your selection has been made within an Excel spreadsheet you can skip this step. Note that Excel mode is only designed for use with Microsoft Excel and when Monologue for Windows is in this mode only data selected from the current Excel spreadsheet will be spoken.

Commanding the Data to Begin Speaking

Move the mouse cursor so that it is over the Monologue for Windows icon. Press the RIGHT mouse button to start speech. Once speech output is complete, control will be returned to your application.



Some applications run "maximized", that is, they use the full screen by default. In that case the Monologue for Windows icon will be obscured. In order to access the services of Monologue for Windows it will be necessary to resize the application's window so that the Monologue for Windows icon is accessible. This can generally be accomplished by either clicking on the application's "maximize" button or by selecting "Restore" from the application's "System" menu.

Steps for Clipboard Use

The steps for using Clipboard mode are as follows:

1. Make sure Monologue for Windows is in "Clipboard" Mode.
2. Mark the data in the desired application.
3. Copy the data to the Clipboard using the "Edit/Copy" command.
4. Click the RIGHT mouse button over the Monologue for Windows icon.

Steps for Excel Use

The steps for using the Excel mode are as follows:

1. Make sure Monologue for Windows is in "Excel" Mode.
2. Mark the desired cells within an Excel worksheet.
3. Click the RIGHT mouse button over the Monologue for Windows icon.

Steps for DDE Server Use

The steps for using the DDE Server mode are as follows:

1. Make sure Monologue for Windows is in "DDE Server" Mode.
2. Start the application which will be the DDE Client.
3. Run the macro or script which initiates the DDE conversation.

Advanced Operational Tips

The tips outlined in this chapter are useful hints for improving the efficiency and performance of applications using Monologue for Windows.

Starting Monologue for Windows

If your use of Monologue for Windows does not require frequent setting of the Volume, Speed, Pitch and Mode you will probably want to start Monologue for Windows as an icon automatically when Windows loads. This can be accomplished by modifying the "LOAD=" line in your WIN.INI file. If, on the other hand, you wish to start Monologue for Windows as a window, modify the "RUN=" line in your WIN.INI. In either case you should append "C:\MONOLOGW\MONOLOGW.EXE" to the appropriate line of the WIN.INI file.



The example assumes that the Monologue for Windows program files are located on drive C: in the MONOLOGW directory. Be sure to use the correct drive and path for your system.

Excel vs. Clipboard Modes

The Excel mode is provided as a convenience to users whose primary Windows use is Microsoft Excel. Excel mode provides the convenience of not requiring the extra step of copying the selected data to the clipboard. However, it does mean that if you wish to use Monologue for Windows with several applications you would need to switch between Clipboard and Excel modes as you activate different applications. When Monologue for

Windows is in Excel mode, the contents of the Windows clipboard are not evaluated at all. However, if Excel is running Monologue for Windows, it will speak the current selection within Excel. This may lead to confusion and speech output which was not intended. For this reason, it is recommended that Excel mode only be used when Microsoft Excel will be the primary Windows application from which speech will be used.

Halting Speech in Progress

On occasion you may find that you have instructed Monologue for Windows to speak some data only to realize that the data selection was incorrect or that an interruption makes the continued speech output undesirable. In these cases, speech output may be halted by placing the mouse cursor over the Monologue for Windows icon and clicking the LEFT mouse button.

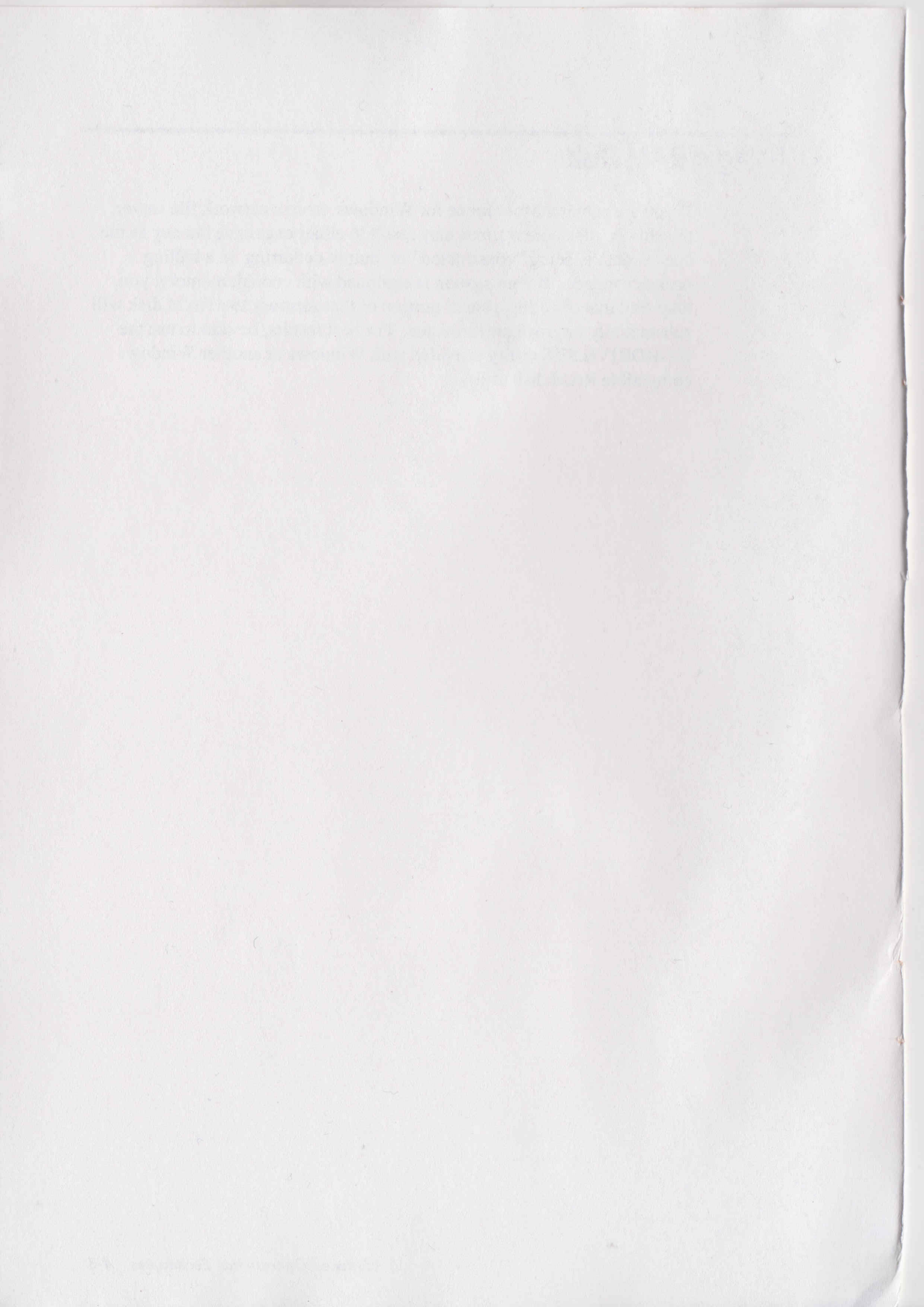
Speech will halt at the end of the current data block. When Monologue for Windows is in Clipboard mode, speech is sent for output one sentence at a time. When Monologue for Windows is in Excel mode speech is sent for output one screen line at a time. As a result of the data blocking scheme, the cessation of output may be deferred as a result of the size of the current data block.

Creating Macros

If your frequently-used Windows applications provide a macro language capability, you may wish to consider creating macros for the application to perform the task of speaking the marked text for you. By using either the DLL or DDE interfaces, you can create macros which will eliminate the need to locate the Monologue for Windows icon. This is handy for applications which operate most efficiently in maximized or full screen mode.

Using a RAM Disk

If you are running Monologue for Windows from a network file server, the slower disk access times may result in either excessive latency as the speech data is being “constructed” or output occurring in a halting broken cadence. If your system is equipped with enough memory, you may find that devoting a small portion of that memory to a RAM disk will substantially improve performance. For best results, be sure to use the RAMDRIVE.SYS utility provided with Windows or another Windows compatible RAM disk utility.



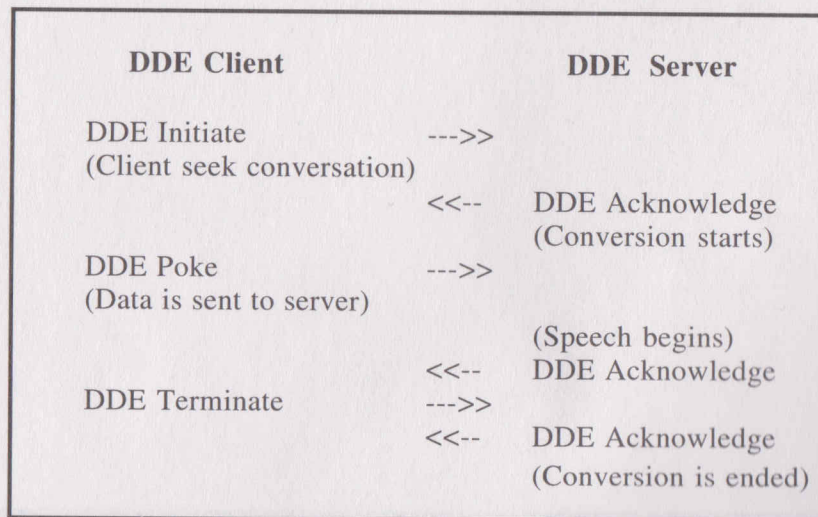
Programming with Monologue

Monologue for Windows provides both DDE and DLL programming interfaces. Using the capabilities provided by these interfaces, you can easily add the power of speech to either Windows applications of your own creation or existing Windows applications. The only requirement is that the application provide a mechanism for either DDE messaging or DLL calls.

The selection of the most appropriate mechanism will depend on your requirements and the capabilities of your programming environment. Generally speaking, the direct call DLL interface will provide the fastest most reliable link to the Monologue for Windows speech engine. While a tutorial in Windows programming techniques is beyond the scope of this manual, the following descriptions may be useful in determining the most appropriate interface for your use.

DDE Speech Example

Monologue for Windows implements a DDE Server interface which allows other applications to initiate a DDE conversation and send data to Monologue for Windows for speaking. It is important to note that DDE is an arrangement where two applications cooperate in a message passing protocol. The DDE Server is actually acting as an agent for the DDE Client application. The following dialogue demonstrates a typical conversation between a DDE Client application and the Monologue for Windows DDE Server.



For the purpose of initiating a conversation, the client must supply two key pieces of information: the Application Name and the Topic. These two pieces of information are used by other Windows applications to determine whether the initiate request is intended for them. Monologue for Windows uses the Application Name MONOLOG and the Topic TALK. Once the conversation has started, Monologue for Windows will speak any data it received in subsequent DDE Poke messages. When the client is done speaking, it should send a DDE Terminate message to signal the end of the conversation. The following Ami Pro 1.2 macro illustrates all the basic steps required to initiate, maintain and terminate a DDE conversation with Monologue for Windows:

```

○ FUNCTION DDESAY()
○ 'Macro demonstrating the Monologue DDE interface with Ami Pro.
○ child=DDEInitiate("MONOLOG","TALK")
○ IF (child=0)
○     message("Can't Initiate DDE Conversation")
○     EXIT FUNCTION
○ ENDIF
○ 'Note the space in the Location field.
○ 'The space is required for some reason.
○ DDEPoke(child,"","Ami Pro calling Monologue via DDE link")
○ DDETerminate(child)
○ END FUNCTION

```

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Here is a functionally identical macro for Microsoft Excel 3.0:

A	B
1	Excel calling Monologue via DDE link.
2	
3	SendChnl SpeakData
4	=INITIATE("MONOLOG","TALK")
5	=POKE(SendChnl,"",B4)
6	=TERMINATE(SendChnl)
7	=RETURN()

While the internal function names will certainly be different for your application's macro language, these example demonstrates the basic characteristics of a macro which utilizes the Monologue for Windows DDE Server.

DLL Speech Example

The provided DLL interface is the preferable mechanism for adding speech to programs which permit calls to external libraries and any personally developed Windows applications. The reason for this is that the interface is much more straightforward and inherently more reliable. Unlike the DDE interface which relies on message passing and its reliance on the server application to do its bidding, the DLL interface is a direct call to the Monologue for Windows speech engine. Because the DLL interface is direct to the speech engine, Monologue for Windows does not need to be started to access the services of the speech engine; thus reducing memory requirement.

Another advantage is that macros or programs using the DLL interface have the ability to control the pitch, volume and speed values used. Since this is accomplished without the intervention of Monologue for Windows, changes made in this way are local to the caller and independent of Monologue for Windows' settings.

The following paragraphs describe how to directly access the speech engine using **FB_SPCH.DLL**. Basic speech capabilities are added to your programs using the entry points **OpenSpeech**, **Say**, and **CloseSpeech**. The interface to these entry points is described in terms of a 'C' language syntax in the following paragraphs. It is assumed that the reader is

familiar with loading and accessing a Windows DLL from his/her programming environment.

If greater control over the speech functions is required (e.g. animated mouth synchronization, word sync) or if your application must continue running while speech is in progress, we recommend purchasing the ProVoice for Windows Developer's Toolkit.

The simplest text-to-speech functions can be performed with the following three routines:

OpenSpeech	initiate a session with the speech engine
CloseSpeech	close a session with the speech engine
Say	speak a buffer-full of text (does not return until all the text is spoken)

Function prototypes for these routines are as follows:

void FAR PASCAL	CloseSpeech (long SCB);
long FAR PASCAL	OpenSpeech (HWND hWnd, WORD mode, LPSTR voiceType);
int FAR PASCAL	Say (long SCB, LPSTR lpText);

The **OpenSpeech** routine must be called once and only once before any of the other speech routines can be used. It returns a *SpeechControlBlock* (SCB) which is required when calling any subsequent speech routines.

Before terminating, your application must call **CloseSpeech** for the SCB that was opened. Here is a sample of code that calls all three of these functions:

```
LONG lSCB;  
  
lSCB = OpenSpeech (0, 0, NULL);  
Say (lSCB, "Hello world.");  
Say (lSCB, "Hello again.");  
CloseSpeech (lSCB);
```

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If you are using the Microsoft or Borland linkers, and wish to explicitly import these DLL functions, you will need to add the following lines to your .DEF file:

```
IMPORTS

    FB_SPCH.CLOSESPEECH
    FB_SPCH.OPENSPEECH
    FB_SPCH.SAY
```

If you are using Microsoft Visual Basic, you should use the following Declarations:

```
Declare Function OpenSpeech Lib "\monologw\fb_spch.dll"
    (ByVal hWnd%, ByVal mode%, ByVal voiceType&) As Long

Declare Function CloseSpeech Lib "\monologw\fb_spch.dll"
    (ByVal lpSCB&) As Integer

Declare Function Say Lib "\monologw\fb_spch.dll"
    (ByVal lpSCB&, ByVal phrase&) As Integer

Global lpSCB As Long
```

Distribution Restrictions

While you may use Monologue for Windows and the speech engine with your personally developed applications, you may NOT distribute these applications for profit or non-profit without securing a Speech Distribution license from First Byte. For licensing information contact us at (310) 793 0610.

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6

Using The Dictionary Manager

The Monologue for Windows Dictionary Manager is a powerful interactive tool for managing the Monologue for Windows Exception Dictionary. With this tool you, can add delete and modify entries in the dictionary while interactively trying various combinations of English and Phonetics constructs.

Dictionary Concepts

Before using the Monologue for Windows Dictionary Manager, it is important to have an understanding of some basic concepts relating to the exception dictionary.

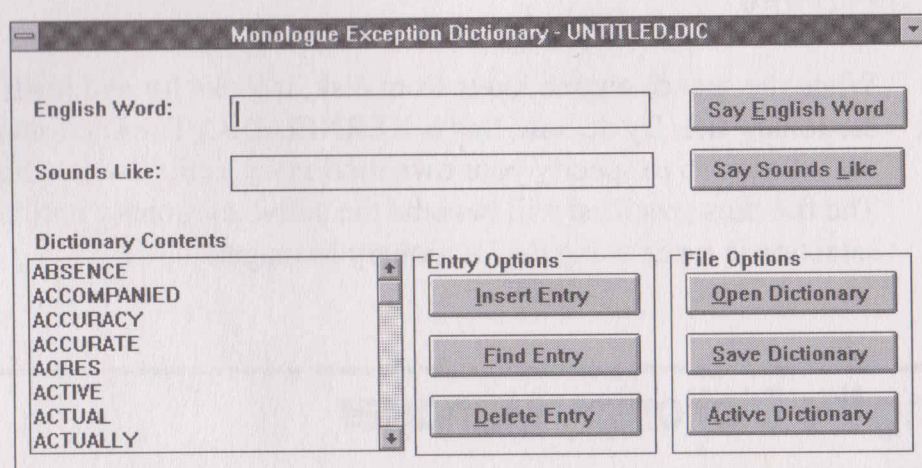


Figure 6-1: Exception Dictionary Dialog Box.

Phonetic Strings

An exception dictionary consists of a sequence of English words and a string of replacement characters. These replacements ARE NOT ENGLISH. They are phonetic strings. Care must be exercised when manipulating phonetics since they are a narrowly defined set of characters which cannot necessarily be strung together in an arbitrary sequence. When you supply the Dictionary Manager with a "Sounds Like" string, which is composed of "misspelled English", the string will be converted to phonetics prior to storage. Refer to "First Byte Phonetic Codes" in this manual for a list of all the valid phonetic codes and modifiers.

Kernel Dictionary

As discussed in "How Monologue for Windows Works", Monologue for Windows uses both the rule and table based methods of converting English text into phonetic codes. The kernel dictionary holds the table of words which are commonly used in English which the Monologue for Windows rule system will not correctly convert to phonetic codes. In addition, the kernel dictionary is the repository of words which contain special stress codes for improved naturalness of output. The kernel dictionary is located in the filename KERNEL.DIC. All dictionaries are based on this master dictionary, and its contents should generally not be modified or deleted. Making changes to entries in the master dictionary entries is not recommended.

Active Dictionary

When the speech engine loads from disk, it looks for and loads a dictionary file. By default, this is KERNEL.DIC. The Dictionary Manager will allow you to specify your own dictionary as the default dictionary. The file thus specified will become the active dictionary until another selection is made using the Dictionary Manager.

Starting the Dictionary Manager

Start the Dictionary Manager by double clicking on its icon in the Monologue for Windows program group of the Windows Program Manager. Once the program has started, you will be presented with its main window. Upon startup, the Kernel Dictionary will be loaded as the basis for a new dictionary.

Browsing the Dictionary

The list box on the left side of the window allows you to browse through the entries in the dictionary. Selecting a word from the list box will cause it to be placed in the English Word and Sounds Like edit frames. Note that the “Sounds Like” data for existing dictionary entries will be displayed as a phonetic string.

Finding an Entry

Enter the English word you are interested in finding in the “English Word” edit frame. Press the “Find Entry” button to locate the word in the dictionary file you are currently working with. If the word is found, its phonetics will be displayed in the “Sounds Like” edit frame and the word will be brought into view within the dictionary list box.

Adding an Entry

Once you are satisfied with the results of your “Sounds Like” entry, you may add the word to the dictionary by pressing the “Add Entry” button. The word will be inserted into the dictionary and the word will be brought into view within the dictionary list box.

Deleting an Entry

A word can be deleted from the dictionary by pressing the “Delete Entry” button when a dictionary entry is in the “English Word” edit frame. An entry may be brought into the edit frame by either using the “Find Entry” button or by selecting the word from the dictionary list box.

Testing an Entry

You may at any time test the appropriateness of the selection by pressing either the “Say English Word” or “Say Sounds Like” trial button. The “Say English Word” button will cause the Dictionary Manager to speak the English word without correction. The “Say Sounds Like” button will cause the Dictionary Manager to speak the proposed replacement phonetics.

Saving your Work

Once you have made all the desired changes to your dictionary, you may save it by pressing the “Save Dictionary” button. You will be presented with a standard “File Save” type dialog box. Enter the desired name for your file in the edit frame or select the name of an existing file from the files list box and press the “OK” button. Your dictionary file will be written to disk using the name provided.



The name KERNEL.DIC will not be accepted as a name for your dictionary file. This is done in order to protect the master dictionary so you may recover in the event that you inadvertently make changes to the master dictionary which needs to be “Un-Done”.

Setting the Active Dictionary

As noted above in the “Dictionary Concepts” section of this chapter, the speech engine looks for a particular dictionary file upon loading. The “Active Dictionary” button will allow you to define the dictionary file you wish to be used. Press the “Set Active Dictionary” button and you will be presented with a dialog box permitting the selection of an existing dictionary file as the new default dictionary. Make a selection from the Files list box and press “OK” to indicate approval for your selection. The dictionary file named will be immediately loaded by the speech engine and the name will be preserved as the file name to look for in the future.

Loading Another Dictionary

Pressing the “Load Dictionary” button will allow you to edit another dictionary file. You will be presented with a “File Open” type dialog box from which you may select an existing file. Press “OK” to indicate approval and the selected dictionary file will be loaded into memory and will replace the previous data.

Changing Your Mind

Sometimes you may find that some of the changes you have made were not well considered. The Dictionary Manager does not modify the disk files until an explicit “Save Dictionary” command is given. As a consequence, you may “undo” your changes by simply reloading the dictionary file using the “Load Dictionary” button.

Dictionary File Location

The “Load Dictionary”, “Save Dictionary” and “Active Dictionary” options do not facilitate saving dictionary files in any directory other than the one in which Monologue for Windows was installed. All files related to speech need to be located in this directory.

Leaving the Dictionary Manager

You may exit the Dictionary Manager by selecting “Close” from the program’s “System Menu”.



You will not be prompted to save any changes which may not have been written to disk at the time you exit the application.

Creative Talking Scheduler

Creative Talking Scheduler is a multimedia program that makes scheduling appointments easy. You can quickly and easily create appointments, and include in each appointment various characteristics like the name of the person whom you are having the appointment with, the descriptions and time of the appointment. In addition, you can have text-to-speech and voice annotation incorporated in the appointments.

This chapter is organized as follows:

- ☐ Running Talking Scheduler
- ☐ Setting Up Talking Scheduler
- ☐ Activating Talking Scheduler
- ☐ The Talking Scheduler Menus
- ☐ Reviewing Appointments
- ☐ Creating and Modifying Appointments
- ☐ Deleting Appointments
- ☐ Recording Annotated Voice Messages
- ☐ Using Talking Scheduler as an .OLE Client
- ☐ Deleting OLE Objects
- ☐ Quitting Talking Scheduler

Running Talking Scheduler

To run Talking Scheduler:

1. Choose the Scheduler icon in the Creative group window.
The Talking Scheduler window similar to Figure 7-1 appears.

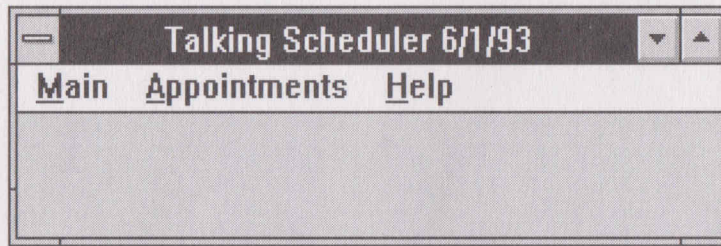


Figure 7-1: The Talking Scheduler window.

Setting Up Talking Scheduler

To set up Talking Scheduler:

1. Select Setup from the Main menu.

The Program Defaults dialog box similar to Figure 7-2 appears.

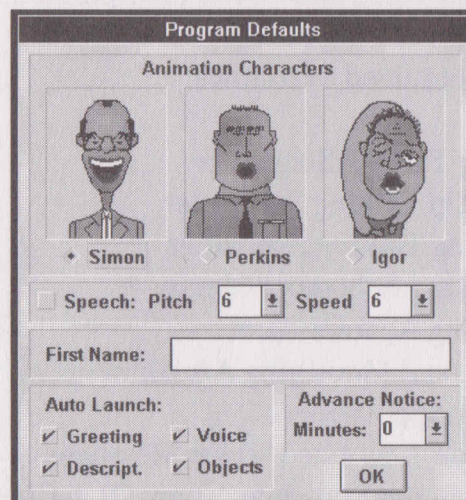


Figure 7-2: The Program Defaults dialog box.

The Program Defaults dialog box has several options that require you to set the default options for the program. The options are Animation Characters, Speech, First Name, Auto Launch, and Advance Notice.

Animation Characters

The three animation characters are Simon, Perkins and Igor. Select the default animation character by clicking the button below the desired character. This character will become your default character when making appointments.

Speech

Each of the three animation characters have their own speech settings that control the pitch and speed of their voices. The settings for Pitch range from lowest (1) to highest (9). The settings for Speed range from slowest (1) to fastest (9).

When this program is run initially, these settings are set to their defaults. To change the settings for the pitch or speed, go to the desired text box to change it.

When using the mouse, click the down arrow beside the text box for a drop-down list of the available settings. To hear the Pitch and Speed settings of the current animation character, click the button to the left of Speech.

First Name

This option requires you to type your first name in the text box. Your name will subsequently be included in each appointment greeting when appointments are presented.

Auto Launch

Auto Launch settings refer to how an appointment is presented. These settings will become the default settings of the newly created appointments. A brief description of each setting is as follows:

Greeting

This option sets the animation character to say the greeting at the appointment time. Otherwise, the greeting is left out altogether. The contents of the greeting message consist of your name, appointment time, and the name of the person whom you have the appointment with.

Description

This option allows the animation character to read the appointment description.

Voice

This option allows annotated voice to be played at appointment time.

Objects

This option determines whether all OLE objects are automatically launched at appointment time.

All the settings made in the Setup command will become the default settings for the Talking Scheduler.

Advance Notice

Advance Notice launches an appointment notice reminding you of the scheduled appointment before the scheduled time. If the appointment is scheduled at 10:30 a.m. and Advance Notice is set at 15 minutes, the appointment notice will be launched at 10:15 a.m.



The setting for Advance Notice should be used with care, even though it does not change the start and end times of your scheduled appointment. It is a global setting and affects the launching times of all appointments that have been made.

Activating Talking Scheduler

To activate Talking Scheduler:

1. Select Run from the Main menu.
Talking Scheduler becomes an icon and Windows timers are set to launch your next appointment.

Whenever Talking Scheduler becomes an icon, it means that it is waiting to launch your next appointment. When the program is maximized, no appointments will "pop-up" automatically.

Remember, the actual time of your appointment depends on the time of the scheduled appointment and the setting made in Advance Notice.



Talking Scheduler uses two of the sixteen system timers available in Windows. If you are running other programs that use up these timers, you will receive an error message. If you receive the error message, you should first close the Talking Scheduler and then close some of the other timer-intensive programs.

The Talking Scheduler Menus

Talking Scheduler has three menus: Main, Appointments, and Help.

The Main Menu

The commands on the Main menu are:

Command	Description
Setup	Sets the default settings for the program.
Clock	Displays the current time and date of the Windows Clock.
Run	Activates Talking Scheduler.
Quit	Quits Talking Scheduler.

The Appointments Menu

The commands on the Appointments menu are:

Command	Description
Review	Views any appointment made.
Add/Modify	Adds or modifies appointments already made.
Delete Days	Deletes all the appointments made on a particular day or for several days.

The Help Menu

The commands on the Help menu are:

Command	Description
Help Index	Provides on-line help on various topics.
About	Opens a window displaying copyright information.

Reviewing Appointments

Appointments can be reviewed on a 120-year calendar. Appointment days, indicated in red, mark the days where appointments have been scheduled. The current day is circled if it appears on the calendar. Clicking the arrow keys on the left scroll the calendar by month, while clicking the arrow keys on the right scroll the calendar by year.

To review appointments for a particular day:

1. Select Review from the Appointments menu.
The Review Appointments dialog box similar to Figure 7-3 appears.

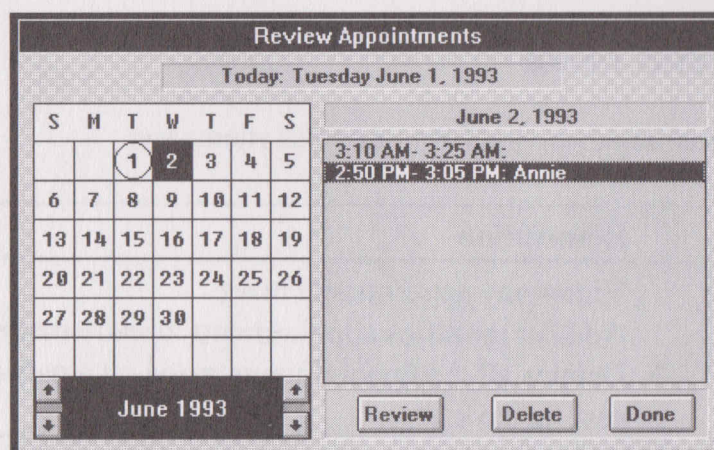


Figure 7-3: The Review Appointments dialog box.

2. Select the day with the left mouse button.
A list of scheduled appointments appear in the list box.
3. Select an appointment listed in the list box.
4. Choose Review.
The dialog box similar to Figure 7-4 appears.

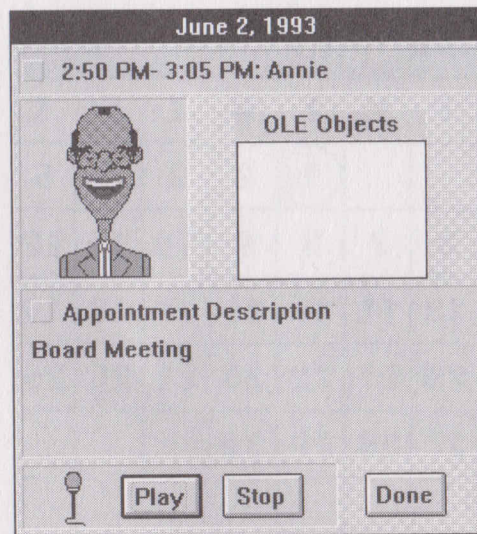


Figure 7-4: The dialog box displaying the appointment.

Once the appointment has been presented, you can review the following:

- ☐ To hear the Greeting, choose the button on the top left-hand corner of the window.
- ☐ To hear the Appointment Description, choose the button above the description text.
- ☐ To hear the Voice Annotations, choose the Play button.
- ☐ To re-open any unopened OLE Objects box, double-click the icon in the OLE box.

Creating And Modifying Appointments

Talking Scheduler has a very fast and intuitive graphical interface for creating and editing appointments.

To create an appointment:

1. Select Add/Modify from the Appointments menu.
The Make Appointments window similar to Figure 7-5 appears.



Figure 7-5: The Make Appointments window.

2. Use the arrows on the left to scroll the calendar by month and the arrows on the right to scroll the calendar by year.
3. Select the date by clicking it with the left mouse button. The dialog box similar to Figure 7-6 appears.

June 2, 1993

Object Help

Start Time 2:50 PM

End Time 3:05 PM

Person Annie

Annotated Voice

Record Play

☐ Appointment Description

Board Meeting

Auto Launch

☒ Greeting

☒ Descript.

☒ Voice

☒ Objects

OLE Objects

Faces

Simon

Perkins

Igor

Delete

Done

Figure 7-6: The dialog box displaying appointment information.

4. Position the mouse pointer outside the 24-Hour Clock.
5. Click the left mouse button and drag the mouse to the desired time.

(As you move around the clock, you will notice that the time indicated beside Start Time moves with the mouse cursor.)



If there are no time conflicts, your newly-created appointment will be indicated in red.

To modify an appointment:

1. Follow steps 1 to 3 above.
2. Click the appointment indicated in blue on the 24-Hour Clock to select it. (This changes the appointment indicated in blue to red.)
3. Use the scroll arrows beside Start Time and End time to change the appointment.

The descriptions below relate to a few of the options found in Figure 7-6.

Done Button	Saves any appointments created or modified.
Delete Button	Deletes current appointment highlighted in red.
Person Text Box	Name of the person whom you have an appointment with. The name will be used during greeting and when reviewing appointments.
Description Text Box	Describes the current appointment and allows up to 127 characters to be entered for the description. To hear the text entered, select the button to the left of Appointment Description.
24-Hour Clock	The 24-Hour clock can be used to create new appointments, select existing appointments for modification, and specify the time for starting and ending new appointments. Appointments appear as "time-slices" on the 24-hour clock. The time specified on the right-hand side of the 24-Hour Clock ranges from 12 a.m. to 12 p.m. and the left-hand side ranges from 12 p.m. to 12 a.m. The "time-slice" of a selected appointment will appear in red while the "time-slice" of an existing but unselected appointment will appear in blue.



To avoid scheduling appointments that may cause time conflicts, you will not be allowed to schedule that overlap. Appointments can be scheduled on a 5-minute interval and must have a minimum duration of 15 minutes.

Deleting Appointments

Talking Scheduler allows you to delete an appointment or all the appointments on a particular day.

To delete an appointment:

1. Select Review from the Appointments menu.
2. Select the day where an appointment is scheduled with the left mouse button.
3. Select the appointment listed in the list box.
4. Choose Delete.

To delete all the appointments on a particular day:

1. Select Delete Days from the Appointments menu.
The Delete Appointments dialog box similar to Figure 7-7 appears.

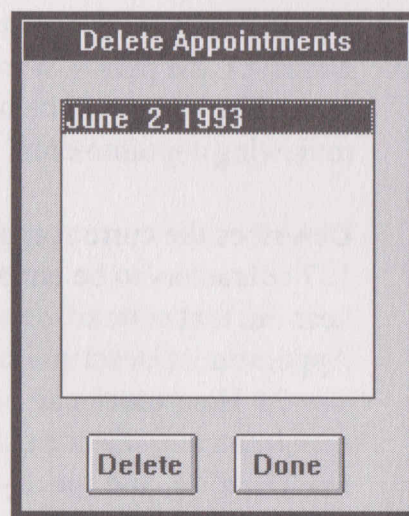


Figure 7-7: The Delete Appointments dialog box.

2. Select the day/days from the list of dates shown.
3. Choose Delete.

Recording Annotated Voice Messages

Talking Scheduler allows you to record annotated voice messages to any existing appointments.

To record an annotated voice message:

1. Select Add/Modify from the Appointments menu.
2. Select the date where you want to record an annotated message from the calender by clicking it with the left mouse button.
3. Click the appointment indicated in blue on the 24-Hour Clock to select it.
4. Choose Record on the dialog box.
5. Select OK when you have completed the recording.
(To re-record the annotated message, select the Record button.)
6. Select Play to review the annotated message.

Voice annotations can consume a large amount of disk space (approximately 11 KB per second). To conserve space, a limit of 30 seconds has been imposed. So keep your annotation fairly short (preferably to just a few seconds).

Using Talking Scheduler as an OLE Client

Talking Scheduler is an OLE client application that can accept objects or files from other applications. As an OLE client, an embedded or a linked object can be placed within an appointment. Once inserted into the appointment, the object can be launched by double-clicking the icon inside the OLE Objects Box.

Embedding is inserting information from one document into another document in a different application. Linking is creating a reference or a link to the document that contains the information.



To place an embedded or a linked object in the appointment, be sure the Add/Modify dialog box has been opened and you have selected or made a new appointment. The current appointment should be highlighted in red.

To embed an object:

1. Select Add/Modify from the Appointments menu.
2. Select the date you want to embed an object from the calender by clicking it with the left mouse button.

3. Select the appointment indicated in blue on the 24-Hour Clock by clicking it.
The selected appointment on the 24-Hour clock changes color.
4. Select Embed from the Object menu.
The Embed Object dialog box similar to Figure 7-8 appears.

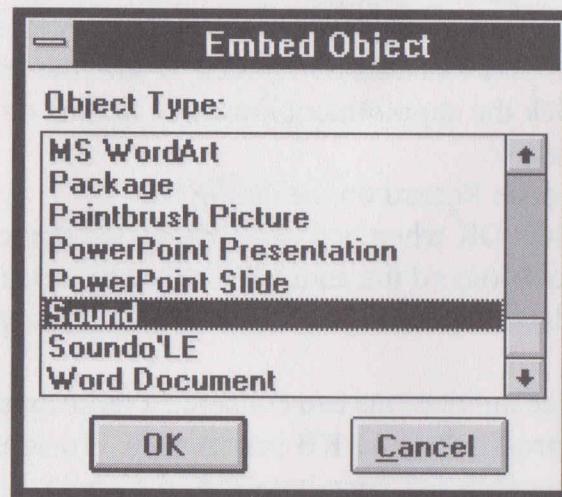


Figure 7-8: The Embed Object dialog box.

5. Select Sound from the Object Type list box.
6. Choose OK.
The Sound Recorder similar to Figure 7-9 appears.

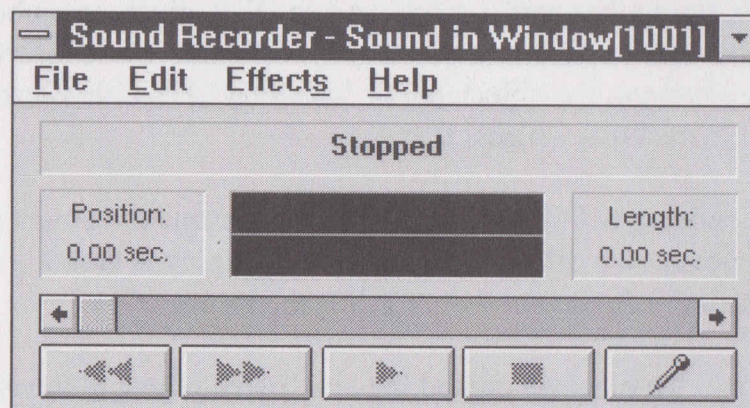


Figure 7-9: The Sound Recorder.

7. Choose Record on the Sound Recorder (indicated by a microphone) to record a short message.
8. Choose Stop.

9. Select Update from the File menu.
10. Select Quit from the File menu to close the Recorder.
The icon representing the file appears in the OLE Objects box.

To link an object:

1. Choose the Recorder icon in the Accessories group window.
2. Create a new file or open an existing file that you want to link.
3. Save the file. (You cannot link a file not saved to an OLE client.)
4. Select Copy from the Edit menu or press <Ctrl+C>.
The file is placed onto the Clipboard Viewer.
5. Return to the appointment where you want to place the linked object.
6. Select Paste Link from the Object menu.
The icon representing the file appears in the OLE Objects box.

Deleting OLE Objects

To delete OLE objects from an appointment:

1. Select Add/Modify from the Appointments menu.
2. Select the date you want to delete the OLE object from the calendar by clicking it with the left mouse button.
3. Select Clear from the Object Menu to delete an OLE object in the current appointment.
4. Select Clear All from the Object Menu to delete all the OLE objects in the current appointment.

Quitting Talking Scheduler

To quit Talking Scheduler:

1. Select Quit from the Main menu.

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SBTALKER

SBTALKER is a text-to-speech synthesizer program with an unlimited vocabulary that resides in memory. It reads ASCII text, performs functions on that data and outputs it vocally through the PC speakers. The READ program reads ASCII text files or text entered from the keyboard or through communications ports.

Starting SBTALKER

To start SBTALKER:

1. Change to \SBTALKER directory.
2. Type **SBTALK**.
3. Press <Enter>.



SBTALK is a batch file (SBTALK.BAT) located in the SBTALKER directory. To run the program without the batch file, enter **SBTALKER /DBLASTER**. This will also install the resident program which will enable the Text-To-Speech feature.

Creating Echo Effect

With SBTALKER, you have the ability to create an echo effect for any of the applications you are running.

To set echo effect:

1. Type **SET-ECHO** [dddd].
2. Press <Enter>.



dddd sets the delay time for the echo effect. The range is from 0 to 4,000. Entering 1000 provides a good echo effect with a 0.1 second delay. A delay setting of 500 produces a reverb effect.

Extended Memory Specification

SBTALKER automatically loads itself into Expanded Memory Specification (EMS), if the proper EMS driver is installed in the system. The usage of Expanded Memory is advantageous because it can hold a larger amount of text, allowing for faster access of data and minimizing breaks between various text.

SBTALKER is compatible with most EMS drivers in the market. However, if you have one that does not work properly with SBTALKER, it may be necessary to remove the EMS driver to run SBTALKER.

Removing SBTALKER

SBTALKER stays in memory until you remove it or reboot the system. You may not be able to run other applications with SBTALKER still in memory.

To remove SBTALKER from memory:

1. Change to \SBTALKER directory.
2. Type **REMOVE**.
3. Press <Enter>.



To effectively remove SBTALKER, it must be the last program loaded into memory.

The Read Program

The READ program can read ASCII text files or text typed from the keyboard. Text can be entered in either upper or lower case. The three ways of reading text are as follows:

1. DOS command
2. Text Reader
3. ASCII text files (Please ensure that you have the SBTALKER installed before using this program.)

Reading From DOS Command

To read text from DOS command:

1. Type **READ** [*any_text*].
2. Press <Enter>.

This command will instruct the program to read the text specified in [*any_text*]. Once the text is read, it will return to the DOS prompt.



You do not have to include the quotation mark when typing the text.

To have the program say "Hello, how are you?" for example, at the DOS prompt:

1. Type **READ "HELLO, HOW ARE YOU?"**.
2. Press <Enter>.

You will hear "Hello, how are you?" from your PC speakers.

Now try typing "**READ 'HELLO, HOW ARE YOU?'"** (without the quotation mark) and press <Enter>. Notice any difference in the output?

Reading from Text Reader

To read text from Text Reader:

1. Type **READ**.
2. Press <Enter>.

The Text Reader will wait for text to be entered from the keyboard before echoing it out to your PC speakers. To stop this program, press <Control+Z> or <Control+C>, followed by <Enter>. You will return immediately to the DOS prompt.

You need not worry about having to call up the READ command while you are in the Text Reader.

Reading from ASCII Text Files

To read text from ASCII text files:

1. Type **READ <pipedReader [/w]**.
2. Press <Enter>.

This command-format instructs READ to get its input from another source other than the two ways mentioned earlier. The source is an ASCII text file from which text is piped into the Read command. This file, specified by *pipedReader*, can be any text file. This program will read any text within this file and terminate when it reaches the end.

The /w option displays text being read.

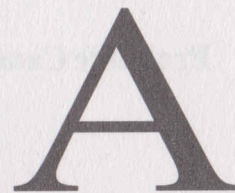
An example of such an entry format is as follows:

1. Type **READ <SBTEST.TXT /w**.
2. Press <Enter>.

The program will begin reading the text that is present within the file SBTEST.TXT when displayed on the screen. To stop this program, press the <Esc> key.



SBTEST.TXT is an ASCII text file supplied with the software. However, you can ask it to read any ASCII text by entering the path where the file is located.



Problem Resolution

In the unlikely event that you encounter difficulty with Monologue for Windows, please read through this Appendix to assist you in resolving the problem.

First Things First

Before going any farther, perform the following simple checks to make sure your hardware and software are functioning properly together. Restart Windows and start Monologue for Windows as the only Windows application and press the "Sample" button. If you are able to hear the "Testing 1 2 3" message, it is safe to assume that the installation of Monologue for Windows is correct. If, on the other hand, either no output was heard or the program or Windows failed to proceed, it is likely that the installation options were chosen incorrectly.

If your system is running Windows with the Multimedia Extensions, you **MUST NOT** attempt to install Monologue for Windows using either the Sound Blaster or Standard Environment options. You can determine whether your system is equipped with the Multimedia Extensions by starting Windows and observing whether the Windows logo screen bears the legend "Windows 3.0 with Multimedia Extensions". If you see this message, you **MUST** install Monologue for Windows using the Multimedia Extensions Environment option.

If your installation options are in error, simply run the INSTALL program again making the correct selections.

Common Problems

Symptom : The installation completed successfully but there is no apparent way to start Monologue for Windows.

Probable Cause : The installation program can only create a Program Group if you are using the Program Manager provided with Windows. If you are using an alternate "shell" program, consult the publisher's documentation for instructions to make Monologue for Windows available for execution.

Symptom : No speech is audible but the system does not seem to hang or otherwise fail.

Probable Cause : Your audio hardware volume level is inadequate. Adjust the volume control on Multimedia Audio / SB Audio Card.

Symptom : Speech is audible but pauses are occurring at inappropriate intervals.

Probable Cause : The disk on which Monologue for Windows is installed is not able to transfer data rapidly enough to keep up with the audio dial out rate. Monologue for Windows should NOT be installed on either a floppy drive or a network drive. The transfer rates on these devices may not be adequate for the purpose of speech continuity. Reinstall Monologue for Windows to a more appropriate device.

Symptom : An audible click occurs at a regular frequency during speech output.

Probable Cause : Your system's CPU speed is not quite fast enough to permit buffering without a "drop-out". This problem occurs most frequently with slower 386 and 386SX systems running in Enhanced Mode. The best solution is to run the system in Standard Mode where the interrupt latency is considerably shorter.

Symptom : Monologue for Windows seems to cause a problem with a network connection or serial communications in another Windows program.

Probable Cause : This problem is most frequently observed when using the Standard Environment option. As discussed in "System Requirements" in this manual, when this option is selected all other system activity is halted. This can cause serious problems for most communication software. Using either the Sound Blaster or Multimedia Environments should eliminate this problem.

Symptom : Speech is audible but seems to “stutter” or “hiccup” but seems to improve as speech goes on.

Probable Cause : This problem occurs when any of the following conditions exists:

- 1) The speech resources are not present in memory and the storage disk is unable to keep up with the speech output.
- 2) Other applications use of memory is forcing an excessive amount of movement of data to-and-from disk.
- 3) A marginal memory situation exists. Note that this problem is NOT fatal and will generally fix itself as the speech engine is repeatedly accessed. If you have loaded several large applications, you may wish to either close some less frequently used applications or add more memory to your system.

B

FIRST BYTE Phonetics

This Appendix discusses the phonetic codes and modifiers used by First Byte.

Phonetic Codes

The following table lists all the phonemes used by the First Byte system along with examples of the sound they represent.

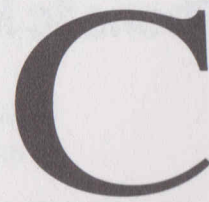
PHONEME	SAMPLE	PHONEME	SAMPLE
IY	be <u>e</u> t	r	re <u>d</u>
IH	bi <u>t</u>	w	w <u>e</u> d
IX	de <u>c</u> ide	b	b <u>e</u> d
EH	be <u>t</u>	d	de <u>a</u> d
AE	ba <u>t</u>	g	ge <u>t</u>
AH	bu <u>t</u>	v	ve <u>t</u>
AX	a <u>b</u> out	DH	th <u>e</u> n
AA	co <u>t</u>	z	ze <u>n</u>
UH	bo <u>o</u> k	ZH	u <u>s</u> ual
UW	bo <u>o</u> t	f	fi <u>t</u>
OW	bo <u>a</u> t	TH	th <u>i</u> n
ER	bi <u>r</u> d	s	si <u>n</u>
AY	bi <u>t</u> e	SH	sh <u>i</u> n
EY	ba <u>i</u> t	h	hi <u>m</u>
OY	bo <u>y</u>	p	pi <u>n</u>
AW	bo <u>u</u> t	PX	sp <u>i</u> n
LX	fa <u>l</u>	t	to <u>p</u>
I	lo <u>w</u>	TX	sto <u>p</u>
m	mo <u>w</u>	DX	bu <u>t</u> ter
n	no <u> </u>	k	ki <u>t</u> e
NG	si <u>n</u> g	KX	sk <u>y</u>
y	ye <u>s</u>		

Phonetic Modifiers

In addition to the phonemes listed in the phoneme table the following symbols are also supported:

SYMBOL	MEANING
[	Shorten the phoneme which follows
]	Lengthen the phoneme which follows
/	Increase pitch by 20 percent
'	Increase pitch by 30 percent and lengthen
"	Increase pitch by 20 percent and lengthen
-	Decrease pitch by 30 percent and shorten
nn (two digits)	Target pitch to this level
Sn (one digit)	Set speed to this level
Vn (one digit)	Set volume to this level

Note that pitch changes are propagated BACKWARD so that placing a pitch digit at the end of a phrase defines the ending pitch. The pitch change will be distributed backward to the last pitch target definition.



Technical Support

We are committed to giving you the best product as well as technical support. When you call, fax or write, please have the following information:

- ☐ Base I/O address used by your card.
- ☐ Error message on the screen and how it came about.
- ☐ Information on the adapter card that conflicts with your card.

Inside U.S.A., Canada and South America, contact:

CREATIVE LABS, INC. Technical Support

1523 Cimarron Plaza, Stillwater, OK 74075. U.S.A.

Tel : (405) 742 6622

Fax : (405) 742 6633

BBS : (405) 742 6660

Operating Hours (Central Time)

Sun-Sat : 8:00 am-10:00 pm

Public Holidays : Closed

Outside USA, Canada and South America, contact:

CREATIVE TECHNOLOGY LTD. Technical Support

67 Ayer Rajah Crescent, #03-18. Singapore 0513.

Tel : (65) 870 0433

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Operating Hours (Singapore Time)

Mon-Fri : 9:00 am-6:00 pm

Sat : 9:00 am-1:00 pm

Sun & Public Holidays : Closed

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Printed in Singapore

KKP WK 40/94 0420000020